

IN THE CLAIMS:

Please amend claim 1 as follows:

CURRENT LISTING OF CLAIMS

Claim 1. (Currently Amended) A method for data security with lock in a hard disk and a solid state disk, comprising following steps:

partitioning ~~a platter of~~ a disk drive into a plurality of disk zones; including a user zone and at least one zone selected from a group consisting of a ROM zone and a protect zone;

providing a plurality of registers for indicating a record of a size of each of the plurality of disk zones;

utilizing a mathematical operation for treating a user input data and a register data; and

assigning one of two different passwords to each of the ROM zone and the protect zone utilizing a password operation mode utilizing the mathematical operation with the user input data and the register data, wherein the user zone is configured to allow a user to execute all ATA commands and the protect zone is configured to prevent a user from reading or writing.

Claim 2. (Previously Amended) The method for data security with lock in a hard disk and a solid state disk according to claim 1, wherein the registers are a R_index register, a P_index register and a LBA_max register for indicating records of three disk zone sizes.

Claim 3. (Canceled)

Claim 4. (Original) The method for data security with lock in a hard disk and a solid state disk according to claim 2, wherein when the register $R_index \geq 1$ and the register $LBA_max > \text{the register } P_index > \text{the register } R_index$, the disk drive 1 is divided into three zones, the disk drive is divided into the user zone, the ROM zone and the protect zone.

Claim 5. (Original) The method for data security with lock in a hard disk and a solid state disk according to claim 2, wherein when the register $R_index \geq 1$ and the register $LBA_max = \text{the register } P_index > \text{the register } R_index$, the disk drive is divided into two zones, the user zone and the ROM zone.

Claim 6. (Original) The method for data security with lock in a hard disk and a solid state disk according to claim 2, wherein when the register $R_index \geq 1$ and the register $LBA_max > \text{the register } P_index = \text{the register } R_index$, the disk drive 1 is divided into two zones, the user zone and the protect zone.

Claim 7. (Canceled)

Claim 8. (Canceled)